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10/073,608	02/11/2002	Vadakkedathu T. Rajan	YOR920020050	5945

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IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT.
P.O. BOX 218
YORKTOWN HEIGHTS, NY 10598

EXAMINER

BROWN JR, NATHAN H

ART UNIT	PAPER NUMBER
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2129

MAIL DATE	DELIVERY MODE
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07/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/073,608

Applicant(s)

RAJAN ET AL.

Examiner

NATHAN H. BROWN JR

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Examiner's Detailed Office Action

1. This Office Action is responsive to the communication for application 10/073,608, filed April 10, 2008.
2. Claims 6-15 are pending. Claims 6, 7, and 11-14 are currently amended. Claims 1-5 are cancelled. Claims 8-10 and 15 are previously presented.
3. After the previous office action, claims 6-15 stood rejected.

Claim Rejections - 35 USC § 112, 1st

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term "desirable property" is not defined in the specification, so the various methods recited to "determine a desirable property" lack definition. The examples disclosed that state "a desirable property...could be based on minimum cost of..." (*italics*, Examiner's) leave open the possibility that a desirable property could be based on something else.

6. Claims 6-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim(s) contain the notion of a "desirable property" which is not defined in the specification in such a way as to enable one

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the various methods recited to "determine a desirable property" to obtain a "desirable property". As far as the specification goes in defining "desirable property" is to disclose that "determining of a desirable property...is carried out by minimizing total cost of interaction among components during at least a partial run of the program" (see p. 3, lines 17-19). The specification does not state that the minimum total cost is the desirable property and it does not fill in the gap how the minimum total cost is used to obtain the "desirable property". Examiner is willing to assume that the "desirable property" is the minimum total cost, but then the disclosed example of

a desirable property (choice of Warehouse 1 or Warehouse 2) could be based on minimum cost of filling the orders/objects during the run, as by filling each order at only one warehouse, without having to fill the balance of an order at the other warehouse. (see p. 9, lines 1-6)

makes no sense as the cost at each warehouse is not determined so the minimum cost warehouse cannot be determined.

7. Claims 6-15 are rejected under 35 U.S.C. 112, first paragraph. Specifically, if the application fails as a matter of fact to satisfy 35 U.S.C. § 101, then the application also fails as a matter of law to enable one of ordinary skill in the art to

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use the invention under 35 U.S.C. § 112.; In re Kirk, 376 F.2d 936, 942, 153 USPQ 48, 53 (CCPA 1967) MPEP 2107.01 (IV).

Claim Rejections - 35 USC § 112, 2nd

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 6-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims 1-16 contain the notion of a "desirable property" which is not defined in the specification. As far as the specification goes in defining "desirable property" is to disclose that "determining of a desirable property ... is carried out by minimizing total cost of interaction among components during at least a partial run of the program" (see p. 3, lines 17-19). The specification does not state that the minimum total cost is the desirable property and it does not fill in the gap of how the minimum total cost is used to determine the "desirable property". If one assumes that the "desirable property" is the minimum total cost, the disclosed example of

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a desirable property (choice of Warehouse 1 or Warehouse 2) could be based on minimum cost of filling the orders/objects during the run, as by filling each order at only one warehouse, without having to fill the balance of an order at the other warehouse. (see p. 9, lines 1-6)

provides a contradiction, as the cost of each order at each warehouse is not determined so the warehouse with the minimum total cost cannot be determined.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 6-15 are rejected under 35 U.S.C. 101 because the claimed invention has no practical application.

The claims fail to provide a tangible result, and there must be a practical application, by either

- 1) transforming (physical thing) or
- 2) by having the FINAL RESULT (not the steps) achieve or produce a useful (specific, substantial, AND credible), concrete (substantially repeatable/non-unpredictable), AND tangible (real world/non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be amended. A claim that

recites a computer that solely calculates a mathematical formula is not statutory.

Amended independent claims 6 and 11 recite a "computer readable medium including computer instructions executable on a computer for carrying out a method" and "a method of characterizing objects generated during at least a partial run of a program" which includes a step to "determine a desirable property for each of said objects". However, determining "a desirable property for each of said objects" is not defined as "a desirable property" is not defined (see §112 rejections, above). Therefore, no specific, substantial, and credible result can be obtained by applying the method or using the computer readable medium including computer instructions to apply the method. Claims 7-10 and 12-15 provide technical details of the steps required to perform the method, but do not cure the deficiencies of claims 6 and 11.

Claim Rejections - 35 USC § 102

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12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 6-15 are rejected under 35 U.S.C. 102(a) as being anticipated by *Kimelman et al.* (*Kimelman*) (PGPUBS: 2002/0111697).

Regarding claim 6. (Previously presented) *Kimelman* teaches a computer readable medium including computer instructions executable on a computer for carrying out a method of characterizing objects generated during at least a partial run of a program (see para. [0019], *Examiner interprets the "cost of interaction among components of a computer program" to be a characteristic of objects generated during at least a partial run of a program.*), each object comprising a plurality of potential alternative properties (see para. [0015] and [0016],

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Examiner interprets a "component" to be an object and "a choice of string representation (e.g. ASCII, UNICODE, EBCDIC) of a component" to be potential alternative properties.), wherein the computer instructions enable the computer to:

a) instrument said at least partial run of said program to determine characterization information about each of said objects (see para. [0024], *Examiner interprets a "monitored run" to be a partial run of said program to determine characterization information about each of said objects.*);

b) determine a desirable property for each of said objects (see para. [0027]-[0029], *Examiner interprets minimized cost of interaction between "components" to be a desirable property for each of said objects.*);

c) determine a desirable one of said potential alternative properties for said objects (see para. [0031], *Examiner interprets "component e ... implemented in UNICODE ... while component f ... implemented in ASCII" to be a desirable one of said potential alternative properties for said objects.*);

d) determine a correlation between said desirable property and said characterization information associated with said objects (see Abstract, *Examiner interprets "determining a choice of implementation properties which minimizes total cost" to be determining a correlation between said desirable property and*

said characterization information associated with said objects.);

e) express the correlation as an allocation strategy (see Abstract, Examiner interprets "assigning choices of implementation properties to said components for a future run of the program" to be expressing the correlation as an allocation strategy.); and

f) implement said allocation strategy to select among the alternative properties for an object subsequently created during an at least partial run of said program based upon characterization information about the subsequently created object (see para. [0032], Examiner interprets "future runs of the same program" to select among the alternative properties for an object subsequently created during an at least partial run of said program based upon characterization information about the subsequently created object.).

Regarding claim 11. (New) *Kimelman* teaches a computer-implemented method of characterizing objects generated during at least a partial run of a program (see para. p. 1, [0019], Examiner interprets the "cost of interaction among components of a computer program" to be a characteristic of objects generated during at least a partial run of a program.), each object

comprising a plurality of potential alternative properties (see para. [0015] and [0016], *Examiner interprets a "component" to be an object and "a choice of string representation (e.g. ASCII, UNICODE, EBCDIC) of a component" to be potential alternative properties.*), said method comprising:

a) instrumenting an initial run of said program to determine characterization information about each of said objects (see para. [0024], *Examiner interprets a "monitored run" to be an initial run of said program to determine characterization information about each of said objects.*);

b) determining a desirable property for said objects (see para. [0027]-[0029], *Examiner interprets minimized cost of interaction between "components" to be a desirable property for said objects.*);

c) determining a desirable one of said potential alternative properties for said objects (see para. [0031], *Examiner interprets "component e ... implemented in UNICODE ... while component f ... implemented in ASCII" to be a desirable one of said potential alternative properties for said objects.*);

d) determining a correlation between said desirable property and said characterization information associated with the one object (see Abstract, *Examiner interprets "determining a choice of implementation properties which minimizes total cost"*

to be determining a correlation between said desirable property and said characterization information associated with the one object.);

e) expressing the correlation as an allocation strategy (see Abstract, Examiner interprets "assigning choices of implementation properties to said components for a future run of the program" to be expressing the correlation as an allocation strategy.); and

f) using implementing said allocation strategy to select among the alternative properties for an object subsequently created during the at least partial run of said program based upon characterization information about the subsequently created object (see para. [0032], Examiner interprets "future runs of the same program" to select among the alternative properties for an object subsequently created during the at least partial run of said program based upon characterization information about the subsequently created object.).

Regarding claims 7 and 12. (Currently amended) The computer readable medium as set forth in claim 6 and the method as set forth in claim 11, wherein the computer instructions further enable the computer to determine the desirable property by minimizing total cost of interaction among components during the

initial run of said program (see para. [0019] and [0027]-[0031], Examiner interprets "instructions for carrying out each method disclosed herein for minimizing total cost of interaction among components of a computer program" to be computer instructions that further enable the computer to determine the desirable property by minimizing total cost of interaction among components during the initial run of said program.).

Regarding claims 8 and 13. (Previously presented) The computer readable medium as set forth in claim 6 and the method as set forth in claim 11, wherein said characterization information of an object comprises at least one of said object's class, classification of said object's creator object, and a code identification of said object's creation (see para. [0009], Examiner interprets "parameter" to be said object's class.).

Regarding claims 9 and 14. (Previously presented) The computer readable medium as set forth in claim 6 and the method as set forth in claim 11, wherein said alternative properties comprise a string representation selected from ASCII, EBCDIC, and UNICODE (see para. [0009]).

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Regarding claims 10 and 15. (Previously presented) The computer readable medium as set forth in claim 6 and the method as set forth in claim 11, wherein said alternative properties comprise a data structure selected from hash table, tree, and compressed data structures (see para. [0009]).

Response to Arguments

14. Applicant's argument filed April 10, 2005 have been fully considered but is moot.

Rejection of Claims 6-15 Under 35 U.S.C. §112, 2nd

Applicants argue:

The Office Action rejected claims 6-15 under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter.

Independent claims 6 and 11 have been amended to recite the additional element of determining the correlation to correct the antecedent basis problem. Further amendments have been made to clarify the invention.

For the foregoing reasons, Applicant respectfully request entry of this amendment and allowance of the pending claims.

Examiner responds:

Applicants' argument is moot based on new grounds of rejection under 35 U.S.C. §112.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Vincent can be reached on 571-272-3080. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129

Nathan H. Brown, Jr.

July 3, 2008